

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-48. canceled

49. (Currently Amended) A link generation process performed by a computer system, said process comprising:

accessing ~~data~~-files of a network site including a server configured to send network site content to remote clients in response to ~~received~~ receipt of requests from said clients, said content including ~~static content~~ and dynamically generated content which is generated in response to receipt of ~~requests~~; at least some of said requests including parameters that determine said dynamically generated content;

analyzing said accessed data files to identify at lease one of valid parameters valid values for parameters, and valid combinations of parameters used by executable code and/or scripts of said network site to determine ~~for generating~~ said dynamically generated content ;

generating, based on said analyzing, data representing modes of a hierarchy of linked nodes for use in indexing content of said network site, wherein leaf nodes of said hierarchy include alternative ~~encoded~~ links for use in accessing said dynamically generated content ~~to allow indexing of said dynamically generated content; and~~

sending said generated data to a user agent ~~remote client or storing said generated data in a data storage device;~~

receiving, from a user agent, one or more requests for content of said network site, said one or more requests including one or more of the alternative links;

processing each of the received alternative links to determine a corresponding link and one or more corresponding parameters that, in combination with the corresponding link, determine corresponding dynamic content of said network site; and

sending the one or more determined links and parameters to a server of said network site to access the corresponding dynamic content for sending to a user agent.

50. (Currently Amended) The process as claimed in claim 49, wherein said generating includes generating a table of contents for content of said network site, said table of contents including said ~~encoded~~ alternative links.

51. (Previously Presented) The process as claimed in claim 50, wherein said table of contents fully connects said content of said network site.

52. (Currently Amended) The process as claimed in claim 50, wherein said table of contents includes one or more pages, at least one of said pages including one or more of said alternative links ~~to content of said network site~~.

53. (Currently Amended) The process as claimed in claim 50, wherein said table of contents includes a plurality of pages, each of said pages including one or more links to respective others of said pages, at least one of said pages including one or more of said alternative links ~~to content of said network site~~.

54. (Currently Amended) The process as claimed in claim 53, wherein links in said table of contents pages are arranged as a hierarchy corresponding to said hierarchy of linked nodes ~~content of said network site~~.

55. (Currently Amended) The process as claimed in claim 50, including generating a link to a table of contents page for a script ~~for that~~ dynamically generating/generates content of said network site on the basis of supplied parameters,

wherein said table of contents page for said script includes a plurality of said alternative ~~encoded~~ links corresponding to respective parameters for said script.

56. (Currently Amended) The process as claimed in claim ~~55~~ 50, including generating a link to a table of contents page for a script that dynamically generates content of said network site on the basis of supplied parameters, wherein the table of contents page for said script includes a plurality of said alternative ~~encoded~~ links corresponding to respective combinations of parameters and parameter values for said script.

57. (Previously Presented) The process as claimed in claim 55, wherein the table of contents page for said script includes at least one link to a further table of contents page

including links corresponding to respective parameters or parameter values for said script and including at least one common parameter or parameter value.

58. (Previously Presented) The process as claimed in claim 49, wherein said data files include at least one of web server configuration files, scripts, and database tables.

59. (Previously Presented) The process as claimed in claim 49, wherein said analyzing includes analyzing scripts of said network site to identify valid database query parameters on the basis of structured query language statements of said scripts.

60. (Previously Presented) The process as claimed in claim 49, wherein said analyzing includes analyzing said data files to identify valid combinations of database query parameters and values for generating said dynamically generated content.

61. (Previously Presented) The process as claimed in claim 60, wherein said analyzing includes analyzing database tables associated with said network site to identify said valid combinations of database query parameters and values.

62. (Currently Amended) The process as claimed in claim 49, wherein said ~~encoded~~ alternative links are in the form of ~~encoded~~ as links to static content.

63. (Currently Amended) The process as claimed in claim 49, wherein each of said ~~encoded~~ alternative links includes a suffix that indicates a type of dynamically generated content for the link.

64. (Currently Amended) The process as claimed in claim 49, wherein said alternative ~~encoded~~ links include at least one link having a prefix identifying the link as a link to a table of contents page and at least one link having a prefix identifying the link as a link to content of said network site.

65. (Currently Amended) The process as claimed in claim 49, including:
~~receiving a request for content of said network site from a remote agent;~~ determining whether said ~~remote~~ user agent is an indexing agent;
sending a table of contents page to said ~~remote~~ user agent if said ~~remote~~ user agent is an indexing agent; and

sending the requested content to said ~~remote-user~~ agent if said ~~remote-user~~ agent is not an indexing agent.

66. (Currently Amended) The process as claimed in claim 49, wherein said ~~encoded~~ alternative links are ~~also~~ URI-encoded and said processing includes decoding said URI-encoding.

67. (Previously Presented) The process as claimed in claim 49, wherein:

said analyzing includes analyzing said data files to identify all servable static content of said network site and all servable dynamically generated content of said network site; and

said generating includes generating links to said servable static content and said servable dynamically generated content to provide a table of contents for all servable content of said network site.

68. (Currently Amended) The process as claimed in claim 49, including analyzing scripts of said network site to determine request data for retrieving said dynamically generated data, wherein said ~~encoded~~ alternative links are generated on the basis of said request data and said parameters.

69. (Previously Presented) The process as claimed in claim 68, wherein said step of analyzing scripts includes analyzing said scripts to determine access data for accessing a database of said network site to generate said dynamically generated content.

70. (Previously Presented) The process as claimed in claim 49, wherein said steps of analyzing and generating are executed by said computer system at periodic intervals.

71. (Previously Presented) The process as claimed in claim 49, wherein said steps of analyzing and generating are executed in response to receiving a request for content of said network site.

72. (Canceled)

73. (Currently Amended) The process as claimed in claim ~~72~~ 49, wherein said ~~translated~~ a received request is an HTTP GET request, and said processing includes processing

the alternative link included with said request to determine a corresponding HTTP POST request for said network site.

74. (Currently Amended) The process as claimed in claim ~~72~~ 49, wherein said generating includes generating an alternative link for inclusion in ~~translated request~~ is an HTTP POST request in order to access dynamic content generated by said network site in response to receipt of a corresponding HTTP POST request.

75. (Canceled)

76. (Currently Amended) The process as claimed in claim 49, including sending said ~~encoded~~ alternative links to a remote system using one of HTTP PUT, HTTP POST, FTP, and SMTP.

77. (Previously Presented) The process as claimed in claim 53, wherein all servable data of said network site can be accessed via selection of any one of the links to said pages.

78. (Currently Amended) The process as claimed in claim 50, wherein said table of contents is generated in one of HTML, XML, HCL, and sitelist.txt formats.

79-90. (Canceled)

91. (Previously Presented) A link generation system having programmed computer components for executing the steps of claim 49.

92-93. (Canceled)

94. (Previously Presented) A computer readable storage medium having stored thereon program code for executing the steps of claim 49.

95.-100. (Canceled)

101. (Previously Presented) The process of claim 49 wherein said encoded links are in a standard form suitable for an arbitrary indexing agent.

102.-105. (Canceled)

106. (Previously Presented) The process of claim 49 wherein said dynamically generated content is not linked to by other content of said network site.

107.-110. (Canceled)

111. (New) The process of claim 49, wherein the step of generating includes generating the alternative links in a form suitable for processing by an indexing agent that cannot process the corresponding links with parameters to allow indexing of the corresponding dynamic content of said network site.

112. (New) The process of claim 49, wherein each of the corresponding links includes a path component and a query string component, and the step of generating includes generating each of the alternative links without a query string component so that a user agent that does not process links with query string components can access the corresponding dynamic content of said network site.

113. (New) The process of claim 112, wherein one or more reserved characters are used as separators between the path components and the query string components and between parameters within the query string components, and the step of generating includes generating each of the alternative links without the reserved characters so that a user agent that does not process links with the reserved characters can access the corresponding dynamic content of said network site.

114. (New) The process of claim 49, wherein the corresponding link includes one or more of the reserved characters '?', '&', and '=', and the step of generating includes generating each of the alternative links without any of the reserved characters so that a user agent that does not process links with the reserved characters can access the corresponding dynamic content of said network site.

115. (New) The process of claim 50, wherein the dynamically generated content includes dynamically generated documents, and the generated table of contents includes a title for at least one of said dynamically generated documents.

116. (New) The process of claim 50, wherein the dynamically generated content includes dynamically generated documents, and the generated table of contents includes metadata of at least one of said dynamically generated documents.

117. (New) The process of claim 50, wherein the dynamically generated content includes dynamically generated documents, and the generated table of contents includes an extract from at least one of said dynamically generated documents.

118. (New) A link generation process, the process being performed by a computer system, and comprising :

accessing files of a network site including a server configured to send network site content to remote clients in response to receipt of requests for said content from said clients, said content including dynamically generated content which is generated in response to receipt of at least some of said requests, at least some of said requests including parameters that determine said dynamically generated content;

analyzing the accessed files to identify at least one of valid parameters, valid values for parameters, and valid combinations of parameters used by executable code and/or scripts of said network site to determine said dynamically generated content ;

generating, based on said analyzing, data representing nodes of a hierarchy of linked nodes for use in indexing content of said network site, wherein leaf nodes of said hierarchy include alternative links for use in accessing said dynamically generated content, each of said alternative links being adapted for use in determining a corresponding link and one or more corresponding parameters that, in combination with the corresponding link, determine corresponding dynamic content of said network site; and

sending the generated data to a user agent.

119. (New) The process as claimed in claim 118, wherein said generating includes generating a table of contents for content of said network site, said table of contents including said alternative links.

120. (New) The process as claimed in claim 119, wherein said table of contents fully connects said content of said network site.

121. (New) The process as claimed in claim 119, wherein said table of contents includes one or more pages, at least one of said pages including one or more of said alternative links.

122. (New) The process as claimed in claim 119, wherein said table of contents includes a plurality of pages, each of said pages including one or more links to respective others of said pages, at least one of said pages including one or more of said alternative links.

123. (New) The process as claimed in claim 122, wherein links in said table of contents pages are arranged as a hierarchy corresponding to said hierarchy of linked nodes.

124. (New) The process as claimed in claim 119, including generating a link to a table of contents page for a script that dynamically generates content of said network site on the basis of supplied parameters, wherein said table of contents page for said script includes a plurality of said alternative links corresponding to respective parameters for said script.

125. (New) The process as claimed in claim 119, including generating a link to a table of contents page for a script that dynamically generates content of said network site on the basis of supplied parameters, wherein the table of contents page for said script includes a plurality of said alternative links corresponding to respective combinations of parameters and parameter values for said script.

126. (New) The process as claimed in claim 124, wherein the table of contents page for said script includes at least one link to a further table of contents page including links corresponding to respective parameters or parameter values for said script and including at least one common parameter or parameter value.

127. (New) The process as claimed in claim 118, wherein said data files include at least one of web server configuration files, scripts, and database tables.

128. (New) The process as claimed in claim 118, wherein said analyzing includes analyzing scripts of said network site to identify valid database query parameters on the basis of structured query language statements of said scripts.

129. (New) The process as claimed in claim 118, wherein said analyzing includes analyzing said data files to identify valid combinations of database query parameters and values for generating said dynamically generated content.

130. (New) The process as claimed in claim 129, wherein said analyzing includes analyzing database tables associated with said network site to identify said valid combinations of database query parameters and values.

131. (New) The process as claimed in claim 118, wherein said alternative links are in the form of links to static content.

132. (New) The process as claimed in claim 118, wherein each of said alternative links includes a suffix that indicates a type of dynamically generated content for the link.

133. (New) The process as claimed in claim 118, wherein said alternative links include at least one link having a prefix identifying the link as a link to a table of contents page and at least one link having a prefix identifying the link as a link to content of said network site.

134. (New) The process as claimed in claim 118, including:

determining whether said user agent is an indexing agent;

sending a table of contents page to said remote agent if said user agent is an indexing agent; and

sending the requested content to said user agent if said user agent is not an indexing agent.

135. (New) The process as claimed in claim 118, wherein said alternative links are URI-encoded, and said processing includes decoding said URI-encoding.

136. (New) The process as claimed in claim 118, wherein:

said analyzing includes analyzing said data files to identify all servable static content of said network site and all servable dynamically generated content of said network site; and

said generating includes generating links to said servable static content and said servable dynamically generated content to provide a table of contents for all servable content of said network site.

137. (New) The process as claimed in claim 118, including analyzing scripts of said network site to determine request data for retrieving said dynamically generated data, wherein said alternative links are generated on the basis of said request data and said parameters.

138. (New) The process as claimed in claim 137, wherein said step of analyzing scripts includes analyzing said scripts to determine access data for accessing a database of said network site to generate said dynamically generated content.

139. (New) The process as claimed in claim 118, wherein said steps of analyzing and generating are executed by said computer system at periodic intervals.

140. (New) The process as claimed in claim 118, wherein said steps of analyzing and generating are executed in response to receiving a request for content of said network site.

141. (New) The process as claimed in claim 122, wherein all servable data of said network site can be accessed via selection of any one of the links to said pages.

142. (New) The process of claim 118, wherein said encoded links are in a standard form suitable for an arbitrary indexing agent.

143. (New) The process of claim 118, wherein said dynamically generated content is not linked to by other content of said network site.

144. (New) The process of claim 118, wherein the step of generating includes generating the alternative links in a form suitable for processing by an indexing agent that cannot process the corresponding links with parameters to allow indexing of the corresponding dynamic content of said network site.

145. (New) The process of claim 118, wherein each of the corresponding links includes a path component and a query string component, and the step of generating includes generating each of the alternative links without a query string component so that a user agent that does not process links with query string components can access the corresponding dynamic content of said network site.

146. (New) The process of claim 145, wherein one or more reserved characters are used as separators between the path components and the query string components and between parameters within the query string components, and the step of generating includes generating

each of the alternative links without the reserved characters so that a user agent that does not process links with the reserved characters can access the corresponding dynamic content of said network site.

147. (New) The process of claim 118, wherein the corresponding links include one or more of the reserved characters '?', '&', and '=', and the step of generating includes generating each of the alternative links without any of the reserved characters so that a user agent that does not process links with the reserved characters can access the corresponding dynamic content of said network site.

148. (New) The process of claim 119, wherein the dynamically generated content includes dynamically generated documents, and the generated table of contents includes a title for at least one of said dynamically generated documents.

149. (New) The process of claim 119, wherein the dynamically generated content includes dynamically generated documents, and the generated table of contents includes metadata of at least one of said dynamically generated documents.

150. (New) The process of claim 119, wherein the dynamically generated content includes dynamically generated documents, and the generated table of contents includes an extract from at least one of said dynamically generated documents.

151. (New) A computer readable storage medium having stored thereon program code for executing the process of claim 118.

152. (New) A system having components configured to execute the process of claim 118.

153. (New) A process performed by a computer system, the process comprising :
receiving, from a user agent, a request for content of a network site, said request including an alternative link generated on the basis of a corresponding link and one or more corresponding parameters of said network site, said alternative link being in a form suitable for processing by an indexing agent that cannot process the corresponding link and parameters to access corresponding dynamic content of said network site;

processing the received alternative link to determine a corresponding link and one or more corresponding parameters that, in combination with the corresponding link, determine corresponding dynamic content of said network site; and

sending the determined link and parameters to a server of said network site to access the corresponding dynamic content for sending to a user agent.

154. (New) The process as claimed in claim 153, wherein said alternative link includes a suffix that indicates a type of dynamically generated content for the link.

155. (New) The process as claimed in claim 153, wherein said alternative link includes a prefix identifying the link as a link to content of said network site, and the process includes receiving at least one link having a prefix identifying the link as a link to a table of contents page for content of said network site.

156. (New) The process as claimed in claim 155, including:
receiving a request for content of said network site from said user agent;
determining whether said user agent is an indexing agent;
sending a table of contents page for said network site to said remote agent if said user agent is an indexing agent; and
sending the requested content to said user agent if said user agent is not an indexing agent.

157. (New) The process as claimed in claim 153, wherein said alternative link is URI-encoded, and said processing includes decoding said URI-encoding.

158. (New) A computer readable storage medium having stored thereon program code for executing the steps of claim 153.

159. (New) A server having components configured to execute the process of claim 153.

160. (New) A link generation computer system comprising :
a network site analysis component to access files of a network site including a server configured to send network site content to remote clients in response to receipt of requests for said content from said clients, said content including dynamically generated content which is

generated in response to receipt of at least some of said requests, at least some of said requests including parameters that determine said dynamically generated content; and to analyze the accessed files to identify at least one of valid parameters, valid values for parameters, and valid combinations of parameters used by executable code and/or scripts of said network site to determine said dynamically generated content ;

a link generator to generate, based on said analyzing, data representing nodes of a hierarchy of linked nodes for use in indexing content of said network site, wherein leaf nodes of said hierarchy include alternative links for use in accessing said dynamically generated content;

a network interface to send the generated data to a user agent; and to receive, from a user agent, a request for content of said network site, said request including one of the alternative links;

a link translator to process the received alternative link to determine a corresponding link and one or more corresponding parameters that, in combination with the corresponding link, determine corresponding dynamic content of said network site; and

wherein the system is configured to send the determined link and parameters to a server of said network site to access the corresponding dynamic content for sending to a user agent.

161. (New) The process of claim 49, wherein said hierarchy is determined by servable content of said network site and said at least one of valid parameters, valid values for parameters, and valid combinations of parameters that are used by executable code and/or scripts of said network site to determine said dynamically generated content.